

**CERCLA Compliance With Other Laws Manual**  
**Overview of ARARs**  
**Focus of ARARs Waivers**



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# Overview of ARARs

## Focus on ARAR Waivers

Office of Emergency and Remedial Response  
Office of Program Management OS-240

Quick Reference Fact Sheet

The Superfund Amendments and Reauthorization Act of 1986 (SARA) adopts and expands a provision in the 1985 National Contingency Plan (NCP) that remedial actions must at least attain applicable or relevant and appropriate requirements (ARARs). Section 121(d) of CERCLA, as amended by SARA, requires attainment of Federal ARARs and of State ARARs in State environmental or facility siting laws when such requirements are promulgated, are more stringent than Federal laws, and are identified by the State in a timely manner.

To implement the ARARs provision, EPA has developed guidance, CERCLA Compliance With Other Laws Manual: Parts I and II (OSWER Directives 9234.1-01 and 9234.1-02). EPA is preparing a series of short fact sheets that summarize these guidance documents. This fact sheet summarizes Chapter 1 of Part I, which provides an overview of ARARs. The material covered here is based on policies in the proposed revisions to the NCP. The final NCP may adopt policies different from those covered here and should, when promulgated, be considered the authoritative source.

### I. OVERVIEW OF ARARs

#### A. Statutory Provisions

CERCLA section 121(d)(2) states that for wastes left on-site, remedial actions must comply with Federal and State environmental laws that are legally applicable or are relevant and appropriate under the circumstances of the release. This section, in effect, codified and expanded on the 1985 NCP, which required compliance with Federal applicable or relevant and appropriate requirements (ARARs), a provision adopted to make use of other programs' or agencies' standards.

In addition, CERCLA requires Superfund remedial actions to comply with State environmental or facility siting laws provided that the State requirements: (1) are promulgated; (2) are more stringent than Federal laws; and (3) are identified by the State in a timely manner. CERCLA section 121(d) also mentions two criteria specifically -- Maximum Contaminant Level Goals (MCLGs) developed under the Safe Drinking Water Act (SDWA), and Water Quality Criteria (WQC) developed under the Clean Water Act (CWA) -- and requires that they be attained when they are relevant and appropriate (compliance with these criteria is discussed in a separate fact sheet). CERCLA also specifies six circumstances in which ARARs can be waived. The ARAR waivers are discussed in Part II of this fact sheet.

#### B. Compliance with ARARs for Removal Actions

Although CERCLA requires compliance with ARARs for remedial actions only, the current NCP requires that removal actions also comply with Federal ARARs, to the extent practicable. Furthermore, EPA policy under the proposed NCP requires that removal actions comply with both State and Federal ARARs to the extent practicable. Until this policy is promulgated by regulation, however, compliance with State ARARs during removal actions must be justified based upon protectiveness.

Factors used in determining whether removal compliance with ARARs is practicable include: (1) the urgency of the situation; and (2) the scope of the removal action to be conducted, which includes consideration of the statutory limits for removal actions. An example of a situation where compliance with ARARs is not practicable for a removal action would be a site where emergency conditions call for a rapid response, thereby preventing the on-scene coordinator from identifying and attaining ARARs. An ARAR that is beyond the scope of a removal to remediate top-level soil contamination due to leaking drums might be one that applies to lower-level soil remediation. Of course, such a standard may still be an ARAR for any remedial action that is subsequently taken at the site.

### C. Definitions of ARARs and TBCs

In the proposed revisions to the NCP (53 FR 51394), EPA clarified the definitions of "applicable" and "relevant and appropriate" requirements (see Highlight 1).

#### Highlight 1: DEFINITION OF "APPLICABLE" AND "RELEVANT AND APPROPRIATE" REQUIREMENTS

**Applicable requirements** are defined as "cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site."

**Relevant and appropriate requirements** are defined as "substantive environmental protection requirements ... promulgated under Federal or State law that, while not "applicable", ... address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site."

#### 1. Applicable Requirements

An applicable requirement directly and fully addresses the situation at the site. In other words, an applicable requirement is a substantive requirement that a private party would be subject to if it were undertaking the action independently from any CERCLA authority. For a requirement to be applicable, all jurisdictional prerequisites of the requirement must be met, including: (1) the party subject to the law; (2) the substances or activities that fall under the authority of the law; (3) the time period during which the law is in effect; and (4) the types of activities the statute or regulation requires, limits, or prohibits.

#### 2. Relevant and Appropriate Requirements

While a determination of applicability is primarily a legal one, a determination of whether a requirement is relevant and appropriate is site-specific and is based on best professional judgment, taking into account the circumstances of the release or threatened release. This determination should be made in conjunction with pertinent national policies.

There is more flexibility and discretion in making relevant and appropriate determinations than in determining the applicability of a requirement. Only those requirements that are both relevant and appropriate are ARARs. A requirement may be relevant, but not appropriate, because of the site circumstances. Such a

requirement would not be an ARAR for the site. Moreover, it is possible for only a portion of a requirement to be considered relevant and appropriate, while other parts may not. However, once a requirement (or part of a requirement) is found to be relevant and appropriate, it must be complied with to the same degree as if it were applicable.

In determining whether a requirement is both relevant and appropriate to the circumstances of the release, the following comparisons should be made:

- The purpose of the requirement and the purpose of the CERCLA action;
- The medium regulated or affected by the requirement and the medium contaminated or affected at the CERCLA site;
- The substances regulated by the requirement and the substances found at the CERCLA site;
- The actions or activities regulated by the requirement and the remedial action contemplated at the CERCLA site;
- Any variances, waivers, or exemptions of the requirement and their availability for use given the circumstances at the CERCLA site;
- The type of place regulated and the type of place affected by the CERCLA site or CERCLA action;
- The type and size of the structure or facility regulated and the type and size of the structure or facility affected by the release or contemplated by the CERCLA action; and
- Any consideration of the use or potential use of affected resources in the requirement and the use or potential use of the affected resource at the CERCLA site.

A similarity to any one factor is not necessarily sufficient to determine that a requirement is relevant and appropriate. Nor does a requirement have to be similar to the site situation with respect to each factor in order for it to be relevant and appropriate.

#### 3. TBCs

By definition, ARARs are promulgated, or legally enforceable Federal and State requirements. (Because CERCLA identifies them as potentially relevant and appropriate, MCLGs and WQC are considered potential ARARs, even though they are not otherwise enforceable standards.) EPA has also developed another category of requirements, known as "to be considered" (TBCs), that includes nonpromulgated criteria, advisories, guidance,

and proposed standards issued by Federal or State governments. TBCs are not potential ARARs because they are neither promulgated nor enforceable. It may be necessary to consult TBCs to interpret ARARs, or to determine preliminary remediation goals when ARARs do not exist for particular contaminants. However, identification and compliance with TBCs is not mandatory in the same way that it is for ARARs.

#### D. Types of ARARs

EPA has divided ARARs into three categories to facilitate their identification:

- **Chemical-specific ARARs** are usually health- or risk-based numerical values or methodologies used to determine acceptable concentrations of chemicals that may be found in or discharged to the environment, e.g., MCLs that establish safe levels in drinking water.
- **Location-specific ARARs** restrict actions or contaminant concentrations in certain environmentally sensitive areas. Examples of areas regulated under various Federal laws include floodplains, wetlands, and locations where endangered species or historically significant cultural resources are present.
- **Action-specific ARARs** are usually technology- or activity-based requirements or limitations on actions or conditions involving specific substances.

Chemical- and location-specific ARARs are identified early in the process, generally during the site investigation, while action-specific ARARs are usually identified during the Feasibility Study (FS) in the detailed analysis of alternatives.

#### E. Compliance with ARARs for On-site and Off-site Actions

The ARARs provision in CERCLA addresses only on-site actions (see **Highlight 2** for definition of on-site). In addition, section 121(e) exempts on-site actions from having to obtain Federal, State, and local permits. Consequently, the requirements under CERCLA for compliance with other laws differ for on-site and off-site actions, as follows:

- On-site actions must comply with applicable and relevant and appropriate requirements, but need comply only with the substantive parts of those requirements.
- Off-site actions must comply only with requirements that are legally applicable, but must comply with both substantive and administrative parts of those requirements.

(See **Highlight 3** for definitions of "substantive" and "administrative".) Compliance with "relevant and appropriate" requirements is not required for off-site actions.

#### Highlight 2: DEFINITION OF "ON-SITE"

"On-site" is defined in the proposed revisions to the NCP as the "areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action." See 53 FR 51477 (December 21, 1988). "Areal extent of contamination" refers to both surface area, ground water beneath the site, and air above the site. Examples of on-site contamination and treatment units or staging areas separate from (but in "very close proximity to") the contamination include:

- A disposal site for treated wastes in a new landfill outside, but in close proximity to, a contaminated wetland;
- A point-source discharge into a river running through a site. The discharge point would be considered on-site, even if the discharge effluent ultimately runs off-site. The action would have to meet discharge limitations and monitoring requirements, but would not require an NPDES permit; and
- A pump-and-treat system located in the contamination plume several miles downgradient of the source. The ground-water treatment system is considered on-site.

#### Highlight 3: DEFINITIONS OF SUBSTANTIVE AND ADMINISTRATIVE REQUIREMENTS

- **Substantive requirements** are those requirements that pertain directly to actions or conditions in the environment. Examples include quantitative health or risk-based standards for certain hazardous substances (e.g., MCLs for drinking water), and technology-based standards (e.g., RCRA minimum technology requirements for double liners and leachate collection systems).
- **Administrative requirements** are those mechanisms that facilitate the implementation of the substantive requirements of a statute or regulation (e.g., requirements related to the approval of or consultation with administrative bodies, documentation, permit issuances, reporting, recordkeeping, and enforcement).

## F. ARARs Documentation

ARARs considered for each alternative in the detailed analysis of alternatives should be documented in detail in the Remedial Investigation/Feasibility Study (RI/FS). The Proposed Plan and the ROD should summarize how the components of an alternative will comply with major ARARs, and should describe why the requirement is applicable or relevant and appropriate. The ROD should document ARARs as follows: (1) major ARARs should be discussed in the Description of Alternatives; (2) ARAR compliance should be summarized in the Summary of the Comparative Analysis; and (3) all ARARs selected for the remedy should be listed and briefly described in the Statutory Determinations section.

When an alternative is chosen that does not attain an ARAR, the basis for waiving the requirement must be fully documented and explained. TBCs referred to in the ROD should be listed and described briefly, as well as the reasons for their use. Generally, there is no need to document why a requirement is not an ARAR, although documentation should be provided for both ARARs and TBCs when the determination has been difficult or controversial. (See Guidance on Preparing Superfund Documents, [ROD Guidance] EPA-540/G-89/007, July 1989, and Guidance for Conducting RI/FSs Under CERCLA, EPA 540/G-89/004, October 1988, for further information.)

## G. Policy on Newly Promulgated Requirements "Freezing" ARARs at the ROD

If a requirement that would be applicable or relevant and appropriate to the remedial action is promulgated after the Record of Decision (ROD) is signed and the ARARs for the selected remedy have already been established, the remedy will be evaluated in light of the new requirement to ensure that the remedy is still protective.

To the extent that the remedy remains protective in light of any new information reflected in the requirement, the original ARARs remain "frozen" at the ROD and nothing more needs to be done. However, if it is determined that the new requirement must be met in order for the remedy to be protective, the remedy must be modified to attain the requirement through an Explanation of Significant Differences (ESD) or ROD amendment. For example, a new requirement for a chemical at a site may indicate, through new scientific information on which it was based, that the cleanup level selected for the chemical corresponds to a cancer risk of  $10^{-2}$  rather than  $10^{-5}$ , as originally thought. The original remedy would have to be reevaluated in terms of the new requirement because it may no longer be protective.

## II. FOCUS ON ARAR WAIVERS

CERCLA section 121(d) provides that, under certain circumstances, an ARAR may be waived. The six statutory waivers are provided in **Highlight Box 4** and are discussed more fully below. These waivers may not be used for off-site actions.

### Highlight 4: STATUTORY ARAR WAIVERS

The six ARAR waivers provided by CERCLA are:

1. Interim Measures Waiver;
2. Equivalent Standard of Performance Waiver;
3. Greater Risk to Health and the Environment Waiver;
4. Technical Impracticability Waiver;
5. Inconsistent Application of State Standard Waiver; and
6. Fund-Balancing Waiver.

The Interim Measure waiver may be used when an interim measure that does not attain all ARARs is expected to be followed by a complete measure that will attain all ARARs (see **Highlight Box 5** for an example). The interim measure should not cause additional migration of contaminants, complicate the site response, or present an immediate threat to public health or the environment, and must not interfere with or delay the

### Highlight 5: EXAMPLE OF INTERIM MEASURES WAIVER

At a mining site, interim measures were used to address drainage of contaminated water from a mine. The action involved passive treatment of mine tunnel discharges through construction of an artificial wetland, which would reduce contamination from the mine tunnel to the level of contamination present upstream. Since the discharge exceeded State ambient water quality standards for the stream, the standards were waived until the final remedy was implemented, which would address in-stream contamination.

final remedy. It should be noted, however, that if a requirement relates to some portion of the long-range site cleanup that is outside the scope of the immediate remedial action, it is not an ARAR for this action and a waiver is unnecessary.

**The Equivalent Standard of Performance** waiver may be used in situations where an ARAR stipulates use of a particular design or operating standard, but equivalent or better remedial results could be achieved using an alternative design or method of operation. In invoking this waiver, the alternative should be equal to or greater than the ARAR in terms of: (1) the degree of protection afforded; (2) the level of performance achieved; and (3) the potential to be protective in the future. The time required to achieve beneficial results using the alternative should be considered; however, the duration of the alternative should be balanced against other beneficial factors that may ensue from using the alternative. A technology-based requirement must be evaluated from a technology performance perspective, not from a risk perspective.

**The Greater Risk to Health and the Environment** waiver is available for situations where compliance with an ARAR will cause greater risk to human health and the environment than noncompliance. The more significant the risks, the longer they are in duration, and the more irreversible the harm from compliance with an ARAR, the more appropriate the use of this waiver (see Highlight 6 for an example).

#### **Highlight 6: EXAMPLE OF GREATER RISK TO HEALTH AND THE ENVIRONMENT WAIVER**

A pump-and-treat system may be selected to remove ground water contamination from landfill releases. Analysis found that natural flushing through the landfill, after excavation of the highly contaminated waste, would facilitate cleanup of the ground water and remove residual contamination from the landfill. The waiver for greater risk was used to waive the applicable RCRA closure requirement for an impermeable cap, because such a cap would prevent natural flushing and would significantly delay and reduce the effectiveness of the ground water cleanup, and therefore the remedial action's effectiveness in reducing risk.

**The Technical Impracticability** waiver may be used when compliance with an ARAR is technically impracticable from an engineering perspective. The waiver can be used if either of two criteria are met: (1) engineering feasibility, in which current engineering methods necessary to construct and maintain an alternative that will meet the ARAR cannot reasonably be implemented; and (2) reliability, in which the potential for the alternative to continue to be protective into the future is low, either

because the continued reliability of technical and institutional controls is doubtful, or because of inordinate maintenance costs. Use of the waiver may consider cost, although cost should not be the major factor (see Highlight 7 for an example).

#### **Highlight 7: EXAMPLE OF TECHNICAL IMPRACTICABILITY WAIVER**

Ground water located in bedrock fractures and deep bedrock contained highly contaminated pockets of liquid waste along the fractures. MCLs were waived because their attainment was technically impracticable for several reasons, including: (1) difficulty in predicting the extent and location of fractures; (2) the inability to locate and extract all pockets of liquid waste; (3) excessive time frames for cleanup; and (4) the irregular nature of the fractures that made effective placement of extraction wells difficult.

**The Inconsistent Application of State Standard** waiver may be invoked when evidence exists that demonstrates that a State standard has not been or will not be consistently applied to other remedial sites within the State, including both NPL and non-NPL sites. A waiver may be used, for example, for a State standard that was promulgated but never applied, or for a standard that has been variably applied or enforced. A State standard is presumed to have been consistently applied unless there is evidence to the contrary.

**The Fund-Balancing** waiver may be invoked when meeting an ARAR would entail such cost in relation to the added degree of protection or reduction of risk afforded by that standard that remedial actions at other sites would be jeopardized. This waiver should be considered when the cost of attaining an ARAR is 20% of the annual remedial action budget or \$100 million, whichever is greater (see Highlight 8 for an example).

#### **Highlight 8: EXAMPLE OF FUND-BALANCING WAIVER**

The Fund-balancing waiver was invoked to waive compliance with State water quality standards because attaining these standards would have required removal and off-site disposal of more than 4 million cubic yards of contaminated ore, tailings, and bottom sediments in the streams and reservoir, at an estimated cost of \$1.4 billion. At the time of ROD signature, the Fund had been nearly depleted, with remaining monies reserved for ongoing projects. The waiver allowed selection of a protective alternative of partial capping and surface water diversion, costing \$72.2 million.